Lake Superior Lakewide Management Plan (LaMP)

2000

Lake Superior Binational Program

Preface

Lake Superior Lakewide Management Plan

One of the most significant environmental agreements in the history of the Great Lakes took place with the signing of the Great Lakes Water Quality Agreement of 1978 (GLWQA), between the United States and Canada. This historic Agreement committed the U.S. and Canada (the Parties) to address the water quality issues of the Great Lakes in a coordinated, joint fashion. The purpose of the Agreement was to "restore and maintain the chemical, physical, and biological integrity of the waters of the Great Lakes Basin Ecosystem" (IJC 1993).

In the revised GLWQA of 1978, as amended by Protocol signed November 18, 1987, the Parties agreed to develop and implement, in consultation with State and Provincial Governments, Lakewide Management Plans (LaMPs) for open lake waters and Remedial Action Plans (RAPs) for Areas of Concern (AOCs). The LaMPs are intended to identify the critical pollutants that affect the beneficial uses and to develop strategies, recommendations and policy options to restore these beneficial uses. Moreover, the Specific Objectives Supplement to Annex 1 of the GLWQA requires the development of Ecosystem Objectives for the Lakes as the state of knowledge permits. Annex 2 further indicates that the RAPs and LaMPS "shall embody a systematic and comprehensive ecosystem approach to restoring and protecting beneficial uses....they are to serve as an important step toward virtual elimination of persistent toxic substances...".

The Great Lakes Water Quality Agreement specifies that the LaMPs are to be completed in four stages. These stages are: 1) when problem definition has been completed; 2) when the schedule of load reductions has been determined; 3) when remedial measures are selected; and 4) when monitoring indicates that the contribution of the critical pollutants to impairment of beneficial uses has been eliminated. These stage descriptions suggest that the LaMPs are to focus solely on the impact of critical pollutants to the Lakes. However, the group of government agencies designing the LaMP felt it was also an opportunity to address other equally important issues in the Lake basin. Therefore, the LaMPs go beyond the requirement of a LaMP for critical pollutants, and use an ecosystem approach, integrating environmental protection and natural resource management.

The LaMP process has proven to be a resource intensive effort and has taken much longer than expected. As a result, the public has had to wait years for a document to review. In the interest of advancing the rehabilitation of the Great Lakes, and getting more information out to the public in a timely manner, the Binational Executive Committee (BEC) passed a resolution in 1999 to accelerate the LaMP effort (BEC 1999). By accelerate, it was meant that there should be an emphasis on taking action and adopting a streamlined LaMP review and approval process. The LaMPs should treat problem identification, selection of remedial and regulatory measures, and implementation as a concurrent, integrated process rather than a sequential one. Consistent with the BEC resolution, the LaMP contains appropriate funded and proposed (non-funded) actions for restoration and protection to bring about actual improvement in the ecosystem. Actions include commitments by the Parties, governments and regulatory programs, as well as suggested

April 2000

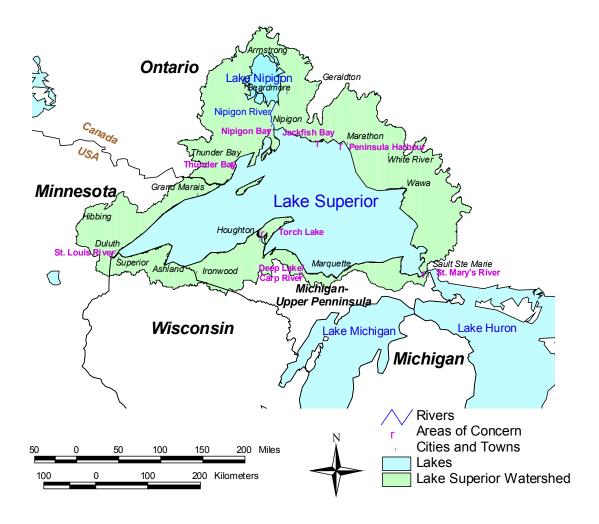
voluntary actions that could be taken by non-governmental partners. LaMP 2002 will report on the success of those actions, as well as identify additional actions needed to achieve established goals and ecosystem objectives.

Furthermore, BEC suggested that the LaMPs be based on the current body of knowledge and state what remedial actions can be implemented now. It was recommended that a LaMP be produced for each Lake by April 2000, with updates every two years thereafter. The concept of adaptive management is being applied to the LaMP process. An iterative approach is being taken with periodic refining based upon the lessons learned, successes, new information, and public input generated. The LaMP will adjust over time to address the most pertinent issues facing the Lake ecosystem.

Some parts of LaMP 2000 have been reviewed by the public and others have not. Some chapters are incomplete and identify data gaps and next steps for LaMP 2002. LaMP 2000 is presented in a loose-leaf format with general tabbed sections that can be inserted into a three-ringed binder. This format will allow easy updates, additions of new material and removal of outdated information. The LaMPs for Lake Erie, Lake Michigan and Lake Superior have common chapters, but differ in format and amount of detail. With the help of the many partners and the public, we will be able to take the best qualities from each and design LaMPs for 2002 that are more concise and user-friendly.

April 2000

Lake Superior Watershed



April 2000

Acknowledgements

Lake Superior Lakewide Management Plan

The Lake Superior Lakewide Management Plan 2000 was prepared by the Lake Superior Binational Program's Superior Work Group with assistance from various other agencies and organizations including the Lake Superior Binational Forum. We would like to thank the seven committees of the Superior Workgroup for their efforts in completing this massive document.

Member agencies of the Lake Superior Binational Program are:

1854 Authority

Agency for Toxic Substances and Disease Registry

Bad River Band of Lake Superior Chippewa

Department of Fisheries and Oceans

Chippewa-Ottawa Treaty Fishery Management Authority

Environment Canada

Fond du Lac Band of Lake Superior Chippewa

Grand Portage Band of Lake Superior Chippewa

Great Lakes Indian Fish and Wildlife Commission

Health Canada

Keweenaw Bay Indian Community

Michigan Department of Environmental Quality

Michigan Department of Natural Resources

Minnesota Department of Natural Resources

Minnesota Department of Health

Minnesota Pollution Control Agency

Ontario Ministry of Natural Resources

Ontario Ministry of the Environment

Parks Canada

Red Cliff Band of Lake Superior Chippewa

U.S. Environmental Protection Agency

U.S. Fish and Wildlife Service

U.S. Forest Service

U.S. Geological Survey - Biological Resources Division

U.S. National Park Service

Wisconsin Department of Natural Resources

This document was compiled by Tetra Tech EM Inc., Chicago, Illinois, under contract with the U.S. EPA.

April 2000 iv

Contents

Lake Superior Lakewide Management Plan

Introduction and Purpose of the Lake Superior Lakewide Management Plan
Public Outreach and Education
Ecosystem Objectives
Lake Superior Critical Pollutants
Human Health
Status of Habitat in the Lake Superior Basin
Terrestrial Wildlife Communities
The Aquatic Community Part 1: Fish and Their Habitat
Developing Sustainability in the Lake Superior Basin
Aquatic Nuisance Species
Atmospheric Deposition of Pollutants of Concern
Lake Superior Areas of Concern and Remedial Action Plan Summaries
Total Maximum Daily Load (TMDL) Development Strategy for Lake Superior

April 2000 v